

Upstream Solutions to Downstream Problems



Wisconsin Wetlands Association

promote wetlands as solutions to land + water problems

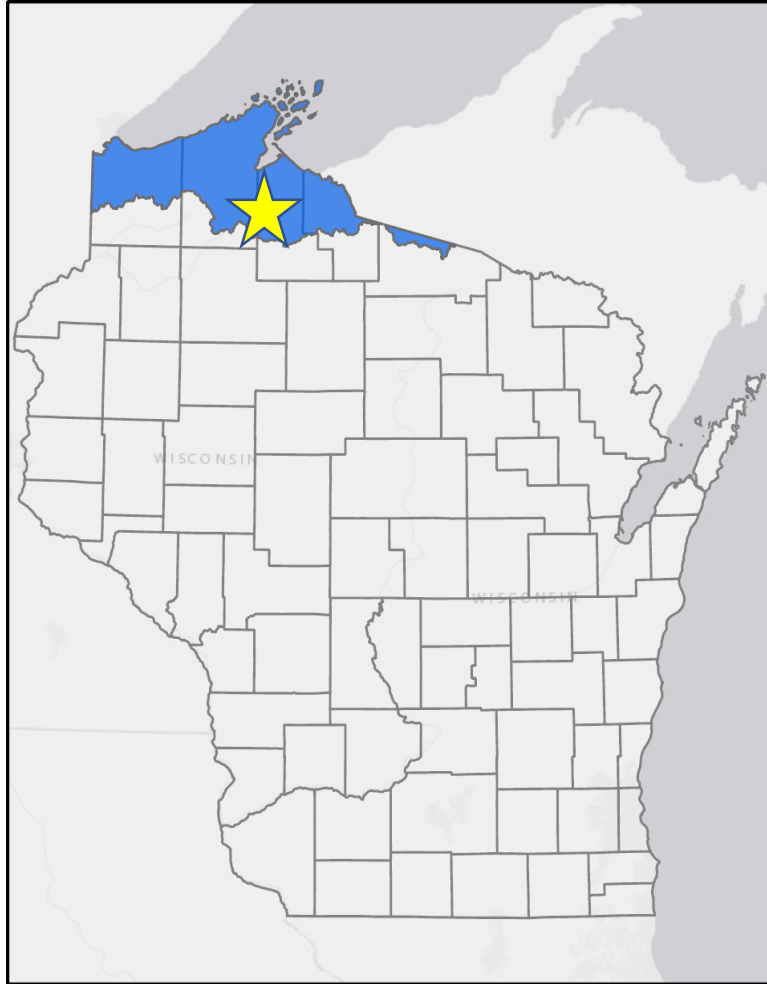
Values

- science-based
- non-partisan
- solution-oriented

Strategies

- advance knowledge
- advance policies and practices
- engage in place-based projects

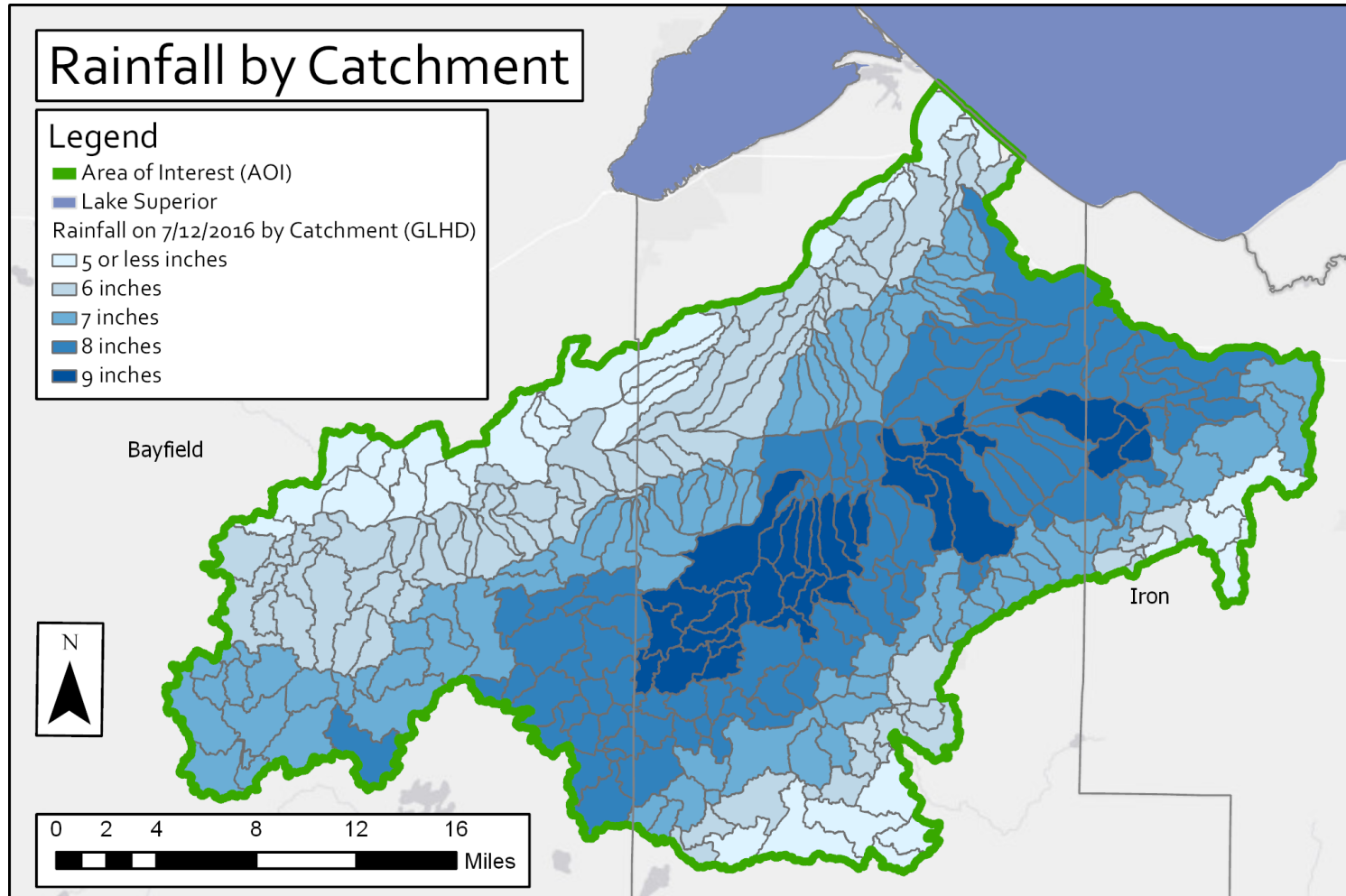




Lake Superior Basin

★ Marengo Watershed

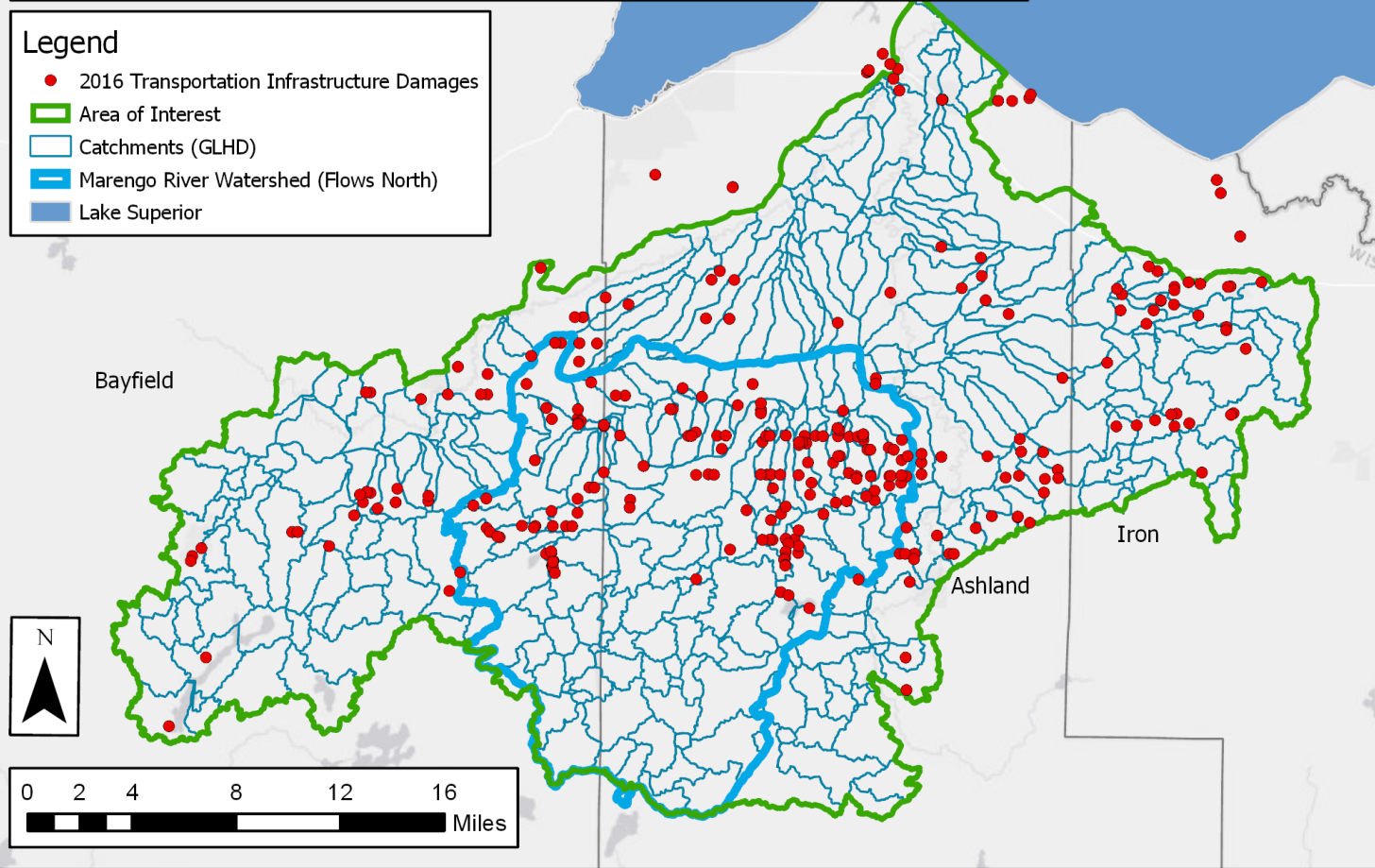
2016 Floods



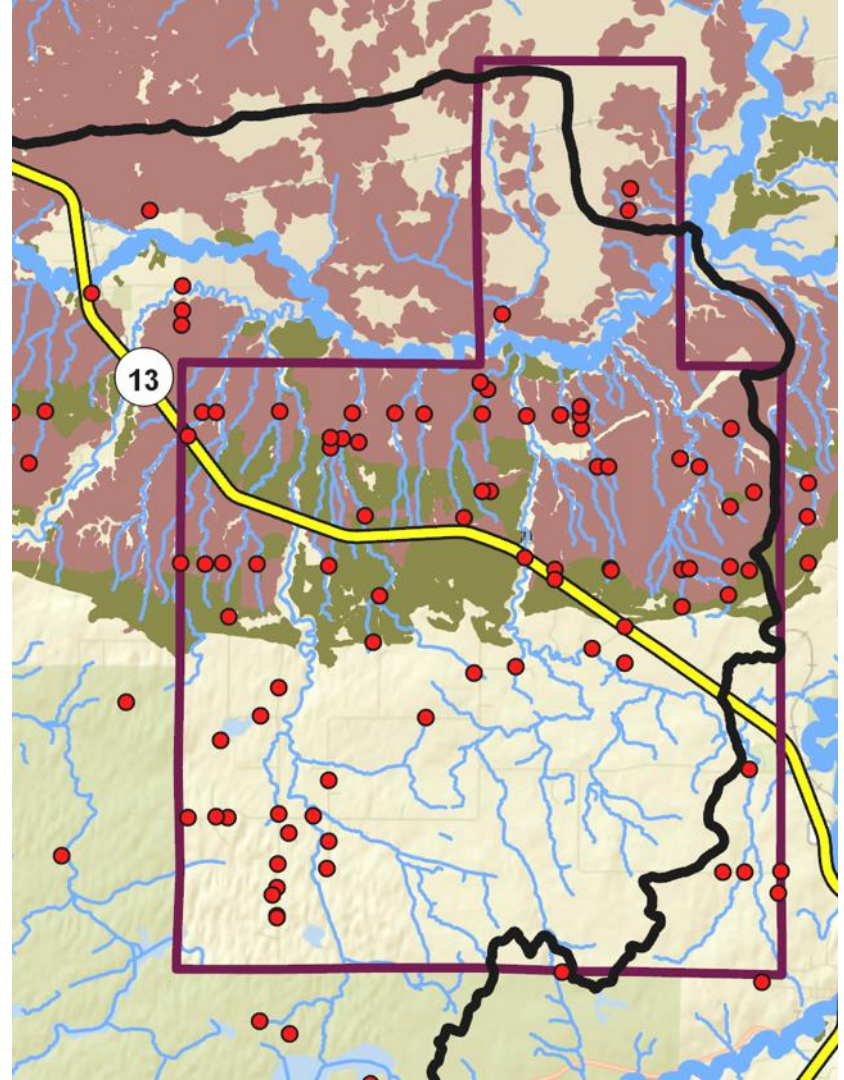
Infrastructure Damages from 2016 Storm

Legend

- 2016 Transportation Infrastructure Damages
- ▭ Area of Interest
- ▭ Catchments (GLHD)
- ▬ Marengo River Watershed (Flows North)
- ▭ Lake Superior



Town of Ashland



**Exploring the Relationship between Wetlands and
Flood Hazards in the Lake Superior Basin**

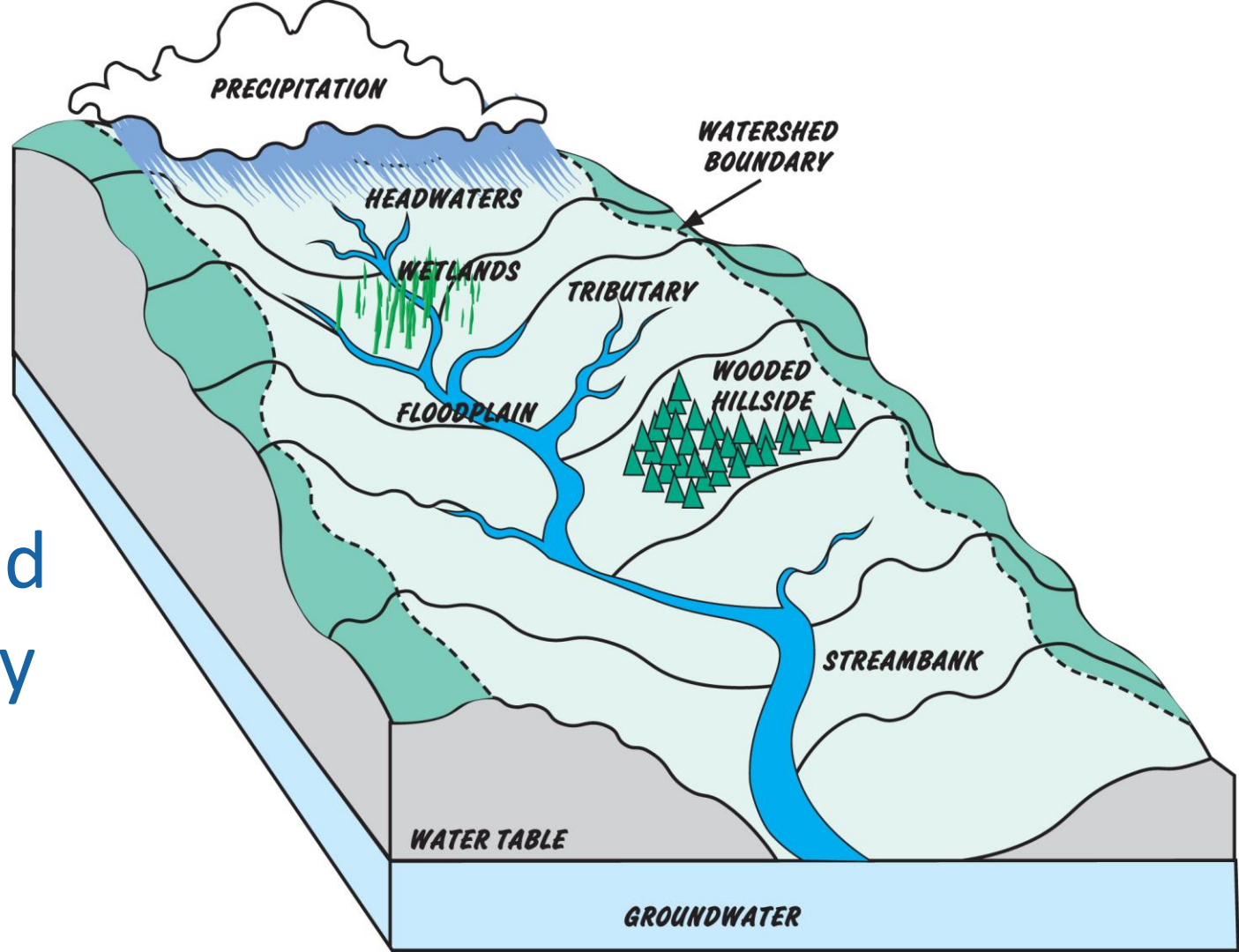


June 2018

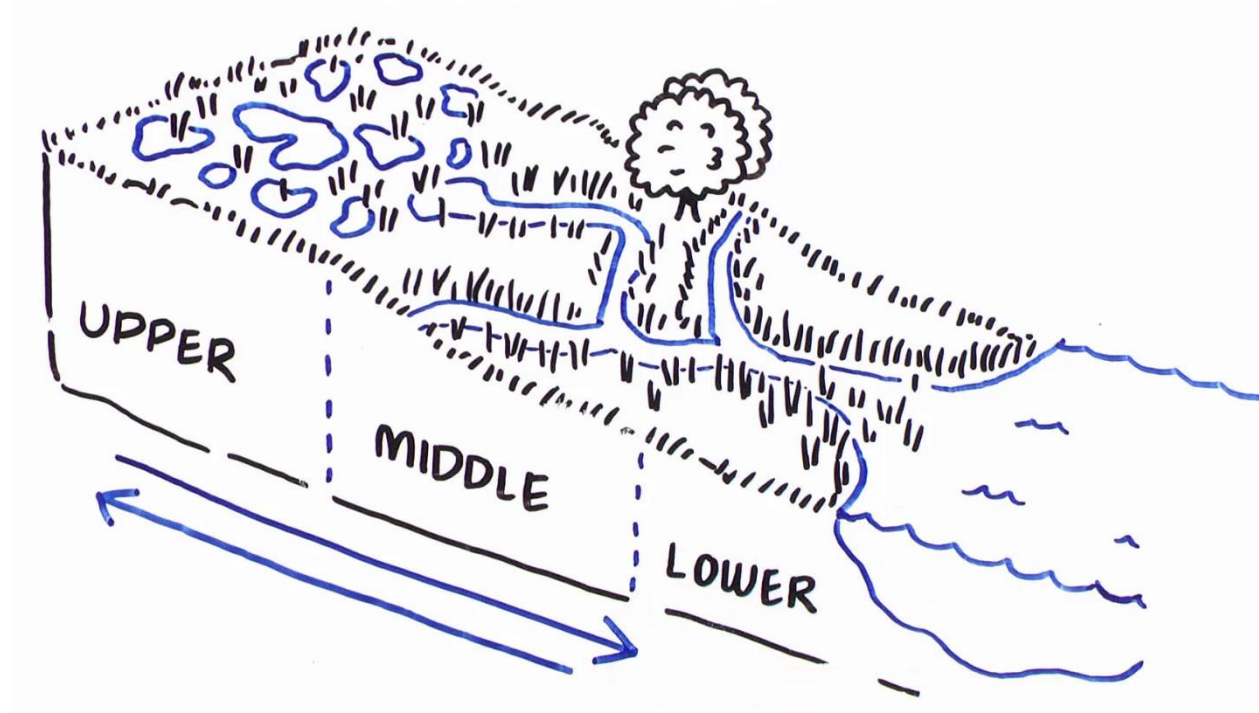
Is there a connection between
degraded upper watershed
wetland and stream conditions
and downstream infrastructure
damages?



Watershed Hydrology



Wetlands & Floodplains



Erosion-Induced Drainage

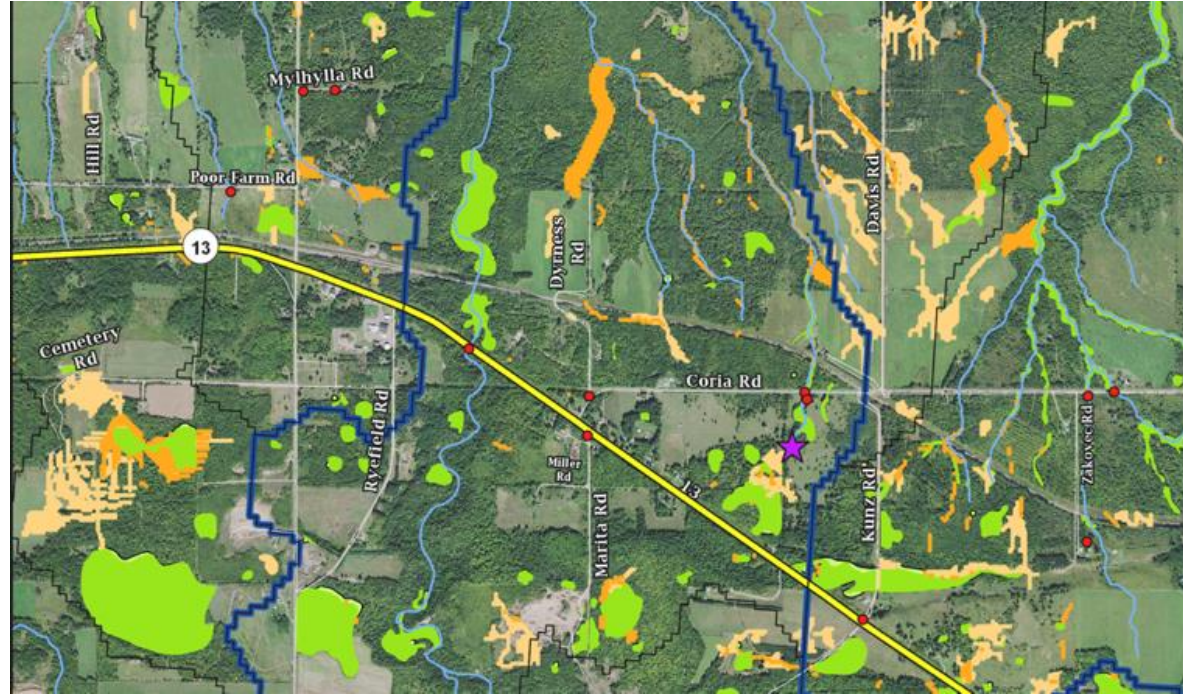
- headcuts & gullies drain mapped wetlands
- channel incision disconnects streams from floodplains



Incomplete Story

Legend

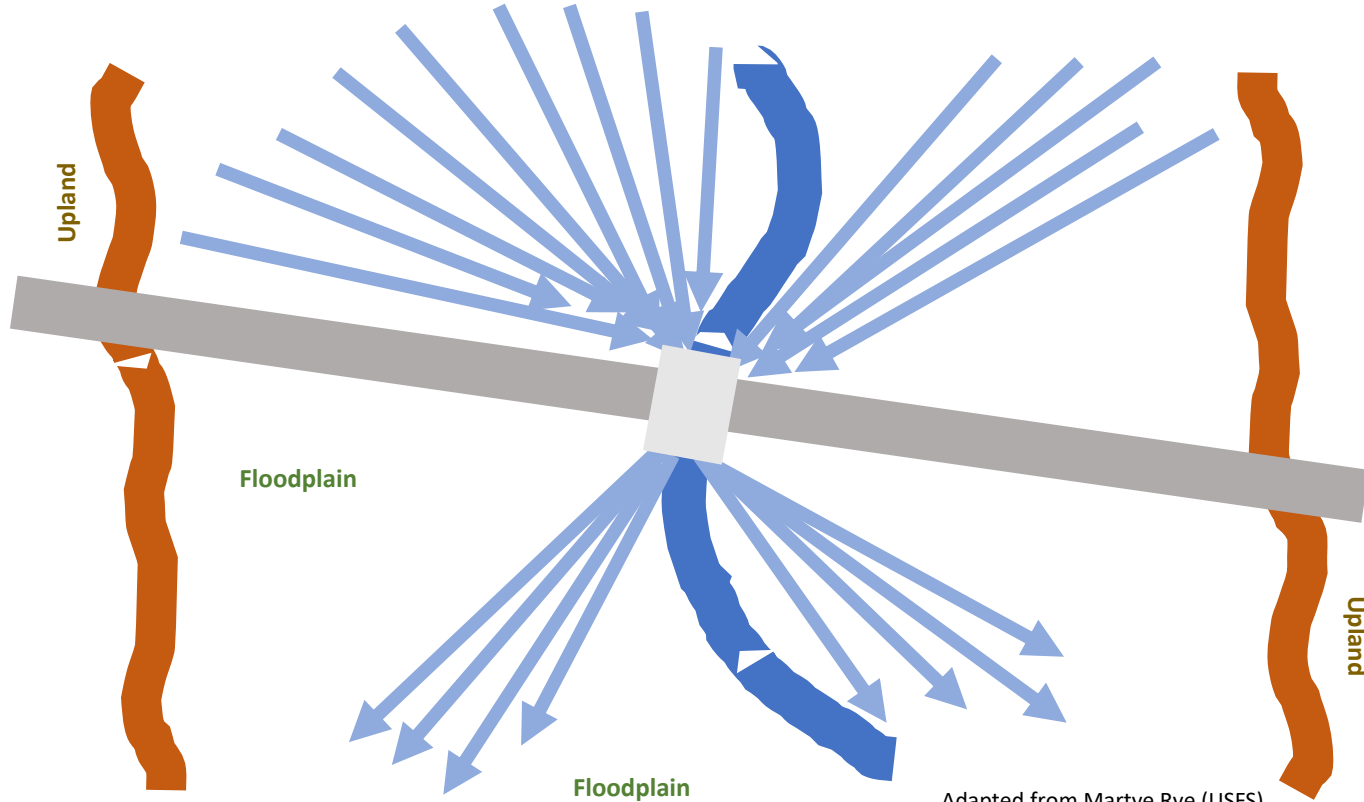
- PRW (DNR)
- PRW (St. Mary's)
- WWI



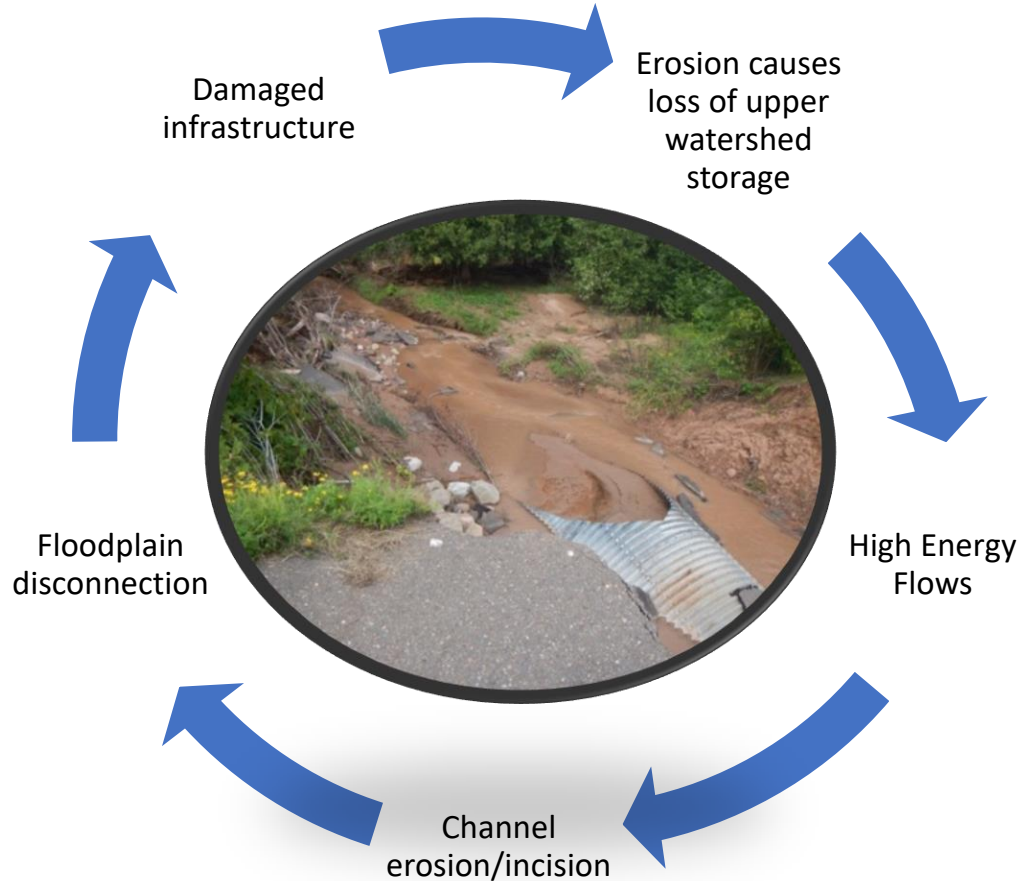
**Less storage
More energy
More Flashy**



Disrupted Channel-Floodplain Processes



Feedback Loop!



(Some) Barriers/Lessons Learned

- Federal/state policies do not prioritize nature-based solutions
- Communities need data and decision-support tools to evaluate wetland strategies
- Resource managers aren't trained to assess or reestablish wetland/floodplain storage
- Regulatory barriers hinder restoration

(Some) Barriers/Lessons Learned

Wisconsin does a lot to reduce flood risks

But not very much to manage flood flows

Some progress...

FEMA Pre-Disaster Mitigation Award for Ashland County Pilot Project to:

- Quantify the extent and effects of degraded wetland and stream conditions upstream of repeatedly damaged culverts
- Establish wetland-focused hazard mitigation strategies

Some progress...



AB 266/SB 252

(Rep. Steineke/ Sen. Petrowski)

Funding for natural flood storage
demonstration projects

Some progress...



Funding for other pilot projects and proposals for other policy solutions are pending

Some progress...

**More communities are
looking upstream to
help address
downstream problems.**

Let us help!



Erin O'Brien
Policy Director

Kyle Magyera
Local Government
Outreach Specialist